**Part B: Reactivity Reading Selection**

1. **Circle or highlight any word that has been part of our vocabulary for the past two units.**
2. **Put a star by any sentence that you do not understand based on confusion with the vocabulary.**
3. **Pair share your responses.**

**How metals react:** Metals lose electrons to form ions and become stable. A small atom like lithium finds it hard to lose its outer electron as the electron is nearer the positive nucleus. A large atom like cesium finds it easier to lose its outer electron as the electron is less well held by the more distant nucleus

**How nonmetals react:** Nonmetals gain electrons in order to form full outer shells *(electron orbitals)* and become stable. A small atom like fluorine finds it easy to attract an electron as the nucleus is not very far away from the outer shell. A large atom like iodine finds it more difficult to attract an electron as the nucleus is further away from the outer shell.

**Reactivity is linked to size:**

* large metal atoms more easily lose electrons so aremore reactive
* large metal atoms are at the bottom of a group
* small nonmetal atoms more easily gain electrons so are more reactive
* small nonmetal atoms are at the top of a group.

**In short:** The periodic table of elements groups together those elements that are alike in properties:

* elements are arranged in order of atomic number
* the group number indicates the number of electrons in the outer shell *(orbital)*
* metals form positive ions (lose electrons)
* nonmetals form negative ions (gain electrons)
* the number of orbitals of the atoms increases going down a group so the size of the atoms increases going down a group
* reactivity is linked to the ability of atoms to gain (nonmetal) or lose (metal) electrons.

Text Source:

Periodic Table: Reactivity in Metals & Nonmetal Groups, p. 1. Research Machines plc (2006)

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